'In re Application of:

FAN, Jian-Bing, et al.

Application No.: 09/785,514 Filed: February 16, 2001

PATENT Attorney Docket No.: 067234-0101

## **REMARKS**

Claims 1-39 are pending and under examination in the above-identified application.

Claims 14, 23 and 35 have been amended above to correct obvious typographical errors. Claims 14, 21, 23, 35, 36 and 37 also have been amended to recite that the plurality of different target sequences are attached to each of the microspheres. Support for the amendment can be found throughout the application including at, for example, page 9, lines 26-28; pages 14-15; page 19, lines 4-6, and in claim 19 as originally filed. Accordingly, the amendments do not raise an issue of new matter and entry thereof is respectfully requested. Applicant has review the rejections set forth in the Office Action mailed August 17, 2004, and respectfully traverse all grounds for the reasons that follow.

Applicant would like to thank Examiner Forman for extending a personal interview with Applicant's representatives on November 22, 2004. The amendments above and remarks below are believed by Applicant to substantially conform to the subject matter discussed in the interview and result in the Examiner's reconsideration of the rejection.

## Rejections Under 35 U.S.C. § 102

Claims 14-39 stand rejected under 35 U.S.C. § 102 as being anticipated by Chee et al. The Office alleges that Chee et al. describe a method which provides an array composition having a substrate with discrete sites and a population of microspheres containing first and second subpopulations where each microsphere contains a plurality of different target analytes. A plurality of different targets or universal probes where different targets ligate to form different analytes are alleged to be covalently attached to the surface of the microspheres. Chee et al. is further alleged to contact the array with a first set of read out probes to detect the presence of a first analyte.

The claimed invention is directed to various methods of analyzing a target analyte. Claims 14 and 35 are directed to a method of detecting the presence of a first target analyte that includes providing an array composition having a population of microspheres having at least a first and a second subpopulation where the microspheres of each subpopulation each include a plurality of different target analytes, and where a plurality of the different target analytes are

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attached to each of the microspheres. Claims 21 and 36, directed to a method of genotyping, and claims 23 and 37, directed to a method of determining the identification of a nucleotide at a detection position in at least a first target sequence, similarly claim providing an array composition having a population of microspheres having at least a first and a second subpopulation where the microspheres of each subpopulation each include a plurality of different target analytes, and where a plurality of the different target analytes are attached to each of the microspheres.

When lack of novelty is based on a printed publication that is asserted to describe the same invention, a finding of anticipation requires that the publication describe all of the elements of the claims. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1349, 48 U.S.P.Q.2d 1225, (Fed. Cir. 1998) (quoting *Shearing v. Iolab Corp.*, 975 F.2d 1541, 1544-45, 24 U.S.P.Q.2d 1133, 1136 (Fed. Cir. 1992)). To establish a *prima facie* case of anticipation, the Office must show that the single reference cited as anticipatory art describes all the elements of the claimed invention.

The Office fails to particularly point out each of the elements claimed by in the invention that are allegedly described in Chee et al. Instead, the Office appears to provide a conclusory statement asserting that the cited reference anticipates the claimed invention because Chee et al. describes covalent attachment via target-probe ligation. Column 9, lines 21-24 and Figure 7 is cited as support for this assertion.

Applicants maintain that Chee et al. does not anticipate the claimed invention because the cited reference fails to describe microsphere subpopulations each having a plurality of different target analytes where the plurality of different target analytes are covalently attached to the microspheres. As acknowledged in Applicants' previous response, Chee et al. may describe a plurality of target analytes but Chee et al. fails to describe a plurality of different target analytes where the different target analytes are covalently attached to a microsphere. Applicants pointed out this distinction when they stated:

[T]he claims as amended recite that the microspheres in <u>each</u> subpopulation of the instant invention <u>have a plurality of different target analytes</u>, wherein a plurality of the different target analytes are covalently attached to the microspheres. The

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passages relied upon by the Examiner although describing a plurality of different target analytes do not describe a plurality of different target analytes attached covalently to a microsphere.

Applicants' Response, filed May 28, 2004, page 13 (emphasis added).

While the independent claims are clear as previously presented, Applicants have amended the claims to reiterate that the claimed plurality of different target analytes are covalently attached to each of the microspheres. In light of this amendment, Applicants submit that the rejection is moot and respectfully request its withdrawal.

## **CONCLUSION**

In light of the Amendments and Remarks herein, Applicant submits that the claims are in condition for allowance and respectfully request a notice to this effect. Should the Examiner have any questions, she is invited to call the undersigned attorney.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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